way of saying: As I was reading it, this is a definite 1/1, this is a one, but I thought about calling it a two.

I describe it that way because it not really a linear scale where 1/2 is this much more scarring than a 2/1, which is this much more scarring than a 2/2, it's much more descriptive with the major category coming in the front. So when someone calls it a one, they're saying it has a level one scarring, two and three. It is also a classification of pleural disease that in the most recent revision has really been coming down to pleural disease's presence or absence on the chest x-ray.

Q. What ILO score is typically considered for an x-ray to show markings consistent with asbestosis?

A. A Category 1. So a 1/0, if you do it in this 0, 0/1, 1/0, 1/1, the 1/0 is the first level of abnormality.

Q. Do you have an opinion to reasonable degree of medical certainty as to whether someone can have asbestosis even though their x-ray is normal as measured on the ILO scale?

A. Yes, it is my opinion that they certainly can have asbestosis with a normal chest film.

Q. How is that? What's the basis for that opinion?

A. Well, it's been documented both using pathology as the gold standard looking at people who have normal chest film but substantial asbestos exposure and finding that a good number of that people, like in one study about 20 percent had

pathological asbestosis with a normal chest x-ray, and then there is also studies that have used CAT scanning as the, what we might say the gold standard is, comparing the plain chest x-ray to what you see on a CAT scan, and again you find 25, some studies up to 40 percent of the people with substantial asbestos exposure, but a normal chest x-ray have some findings of asbestosis on a CAT scan.

Q. Does 2004 ATS statement address the issue of whether one can have asbestosis even with a normal chest x-ray?

A. Yes, that's described and reference in the ATS statement and conforms to what I just described.

Q. Okay. And would you turn in your book to page -- it's Exhibit 25, Bates label 1640006.

A. Yeah, I have that page.

Q. It's, again, 1640006.

A. Um-hum.

Q. Right hand column.

A. Where it says plain chest radiographs are limited with respect to --

Q. Yes.

A. -- with respect to sensitivity and specificity in cases of mild or early asbestosis. Among individuals with asbestosis confirmed by histopathologic findings, 15 to 20 percent had no radiographic evidence of parenchymal fibrosis in one study, similar to the proportion of other

interstitial lung diseases that present with normal chest films.

Q. And this cites to some earlier studies?

A. Yes.

Q. Is one of those the Kipen Study?

A. Yes.

Q. Can you describe for the Court what the Kipen Study is and what it shows?

A. Dr. Kipen was at the time working with Dr. Selikoff at Mount Sinai and what he did was take x-rays -- had both x-rays and pathology on a group of insulators and demonstrated the people who had pathologic asbestosis. About 20 percent of them had a normal chest film. So that's where that 20 percent number comes from, is from Dr. Kipen's study.

Q. Can you briefly describe for the Court the adverse health consequences suffered by someone who has asbestosis yet has a PFT score in the normal range?

A. Well, as we talked about before, those individuals can have a significant loss of lung function for them even though we're still saying that within the population normal range, so it's very unusual for individuals with asbestosis to have shortness of breath, some chest discomfort, fatigue due to -- related to the increase work of breathing because of the scarring in the lung. In addition, they have a significant increase risk of developing lung cancer and subsequent to

that, even if they haven't had the lung cancer yet, they're very concerned about their future risk of lung cancer.

Q. Let me stop you right there. What is the increase in the relative risk of someone contracting lung cancer if they have asbestosis?

A. Well, if they have asbestosis, they're probably about four times as likely as someone who is equivalent to them in terms of smoking history who doesn't have asbestosis. But if you take that person with asbestosis who is a smoker and compare them to a nonsmoker, nonasbestosis exposed person, it's probably about 50 fold because the asbestos multiplies times the risk of smoking.

Q. What percentage of people who contract lung cancer live more than five years?

A. Average, about 15 percent. And then if you take out the people -- there is a small proportion of people who are fairly well cured initially, take those out, you are down to three percent at five years.

Q. What other adverse health consequences are suffered by people who have nonmalignant asbestos disease even though they may have normal pulmonary function tests?

A. The fear of cancer, shortness of breath even within the normal, and then they have a likelihood of developing progressive decline in lung function and eventually dropping below the normal range. Individuals have different rates of

decline, but if they live long enough they usually develop a significant impairment from that declining lung function.

Q. Do they have any increase in the numbers of respiratory infections they will have?

A. Yes, they definitely do that.

Q. What medical treatment steps would you prescribe for a person who suffers from a nonmalignant asbestos disease?

A. Well, I generally recommend they have an annual examination with a physician who knows about asbestos-related disease to follow that progression that I talked about, the disease getting worse, to make sure that they get their annual influenza vaccination. And in addition, for any of them that quit smoking, they need to be actively engaged -- and many of them do smoke -- actively engaged in quitting smoking. A part of the annual evaluation is to reinforce that, make sure that they have quit, provide them additional information if they started again, whatever is necessary. So, it's following the disease. Then the other part of the annual exam is understanding the other diseases that develop in men who are getting to be 60 and 70 and sorting out what might be due to their asbestos and what might be due to heart disease or other lungs disease as well.

Q. How much do these treatment steps, these medical visits and tests typically cost on an annual basis?

A. I would usually recommend they have a complete set of

pulmonary function tests and x-rays, so in Washington you are looking at eight hundred to a thousand dollars with tests and physical examination with a doctor.

Q. Eight hundred to a thousand dollars each year?

A. Correct.

Q. Can you briefly describe the adverse health consequences suffered by someone who has pleural plaques?

A. Pleural plaque, as of the most general statement, usually doesn't have a loss of lung function with it, but you have -- those people have a higher likelihood of eventually developing asbestosis. Because of the asbestos exposure that they've had, they're at a higher risk for lung cancer. So it's very similar to the people with asbestosis in terms of increased risk of lung cancer, fear of lung cancer and progression of lung disease.

Q. Could you turn to page 1640014 in Plaintiffs' Exhibit 25. 1640014?

A. Yeah, have it, um-hum.

Q. What is that a photograph of at the top left side of the page?

A. It's pleural plaque, it's a photograph from an autopsy of someone who had pleural plaque.

Q. What treatment steps would you prescribe for someone who has pleural plaques?

A. Essentially the same as someone who has asbestosis,

annual physical examination and checkup.

MR. FINCH: Your Honor, I note the time, it's 4:30. This would be a good breaking point, if the Court is so inclined. I have fair amount of additional material to elicit from Dr. Welch.

THE COURT: This would be a good time, and I appreciate the break at this point. So we'll recess until tomorrow morning at 9:30.

(Adjournment)

C E R T I F I C A T E.

I, **Theodore M. Formaroli, C.S.R.**, Official United States Court Reporter and Certified Shorthand Reporter of the State of New Jersey, do hereby certify that the foregoing is a true and accurate transcript of the testimony as taken stenographically by and before me at the time, place and on the date hereinbefore set forth.

I do further certify that I am neither a relative nor employee nor attorney nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel and that I am not financially interested in this action.

Theodore M. Formaroli

THEODORE M. FORMAROLI, C.S.R.
Certificate No. 433
Date: June 14, 2005